

Serbian thermal power plants emit more than 15.000 tons of carbon-dioxide (CO<sub>2</sub>) into the atmosphere every day, just from the coal that Serbia is currently forced to import. According to the current estimates, and on the basis of the Decision of the Serbian Government, for the Electric Power Industry which was wrecked in the flooding to produce enough electricity, during this winter, Serbia will be forced to import lignite in the value of around 106 million euros. With the import of all this coal this winter, the circle has closed almost ironically - the burning of coal leads to the CO<sub>2</sub> emission, this stimulates the ever-accelerated global warming, this climate change affects the destructiveness of flooding, the latter destroys the mines from which coal is excavated and then we are forced to import coal so as to burn it to a sufficient extent and - emit more CO<sub>2</sub>.

Namely, according to the latest, Fifth Report of the Intergovernmental Panel on Climate Change (IPCC), in our region, global warming will initiate more frequent and more intense extreme disasters such as the tragic May flooding. During this disaster, the mines of the company "Kolubara" were flooded, these mines supplying with coal the two thermal power plants "Nikola Tesla" (TENT A and B) in Obrenovac, the most powerful facilities of this kind in the Southeast Europe, with a total of eight blocks and more than 2500 MW of installed capacity, which produce around 40 percent of electricity consumed in Serbia. Although the mine in Veliki Crljeni was put into operation during the summer season, water is still being pumped out from the mine Tamnava West Field, so Serbia has no other choice than to import about 17.000 tons of coal on daily basis.

Simultaneously, as it usually happens in life, whereas Serbia that is rich in lignite imports coal, the European Council makes the historic decision that the emission of CO<sub>2</sub> will be reduced by as much as 40% by 2030. As it was announced last week in Brussels, the European leaders had reached this "extremely ambitious, but efficient plan" after the second negotiations. This had been preceded by the recognition that Europe would not be able to reach the set goals related to stopping the climate change by 2020, so it was decided that the use of renewable energy resources in Europe should be increased by 27%. Such a task is not just a number on paper and it involves huge expenses for all member states. Will Serbia, which entered the negotiation process with the Union on 21st January, be able to achieve these demanding goals? Or will the climate change be another unexpected, almost insurmountable difficulty in the process of accession to the European Union?

The few environmental activists in Serbia - the few boring purists who, even in Belgrade, come to work by bike, give their friends energy-saving bulbs as birthday presents, put on sweaters instead of turning up the heating, and use obscure phrases such as the "national communication, mitigation and adaptation" - would say that this is exactly what they were

warning about on time: that Serbia's huge dependence on coal is a form of energy addiction. And that this extent of fossil fuels burning, with almost no practical alternative, cannot end well. After the May flooding, Serbia has literally found itself in an abstinent crisis, forced to buy new doses of coal.

On the other hand, if the orthodox environmentalists are not around, so that the climate change and other subtle, but distant European environmental subjects, which hardly anyone was interested in up until lately, are not discussed in the room, and the subject is related to energy, it is very likely that you will hear from the present experts that not only the energy sector, but also the economy of Serbia relies on coal. The current capacity of the Serbian Electric Power Industry amounts to around 8400 MW of installed capacity and the power that this machinery has provides the low price of electricity, which attracts investors and offers at least some competition to the numerous products made in Serbia. The low price of electricity is not, as it is routinely claimed by know-it-alls, just a "factor of social stability", but it is one of the rare advantages which a producer has when he chooses whether to produce something in Serbia, or in some other place.

Serbia built such a powerful electric power system, which generates 90 million kWh of energy every day, at the beginning of the eighties of the XX century and it has proved to be a significant resource that saved Serbia from the complete collapse during the terrible crises within the recent decades. The heart of this system is located in the Kolubara Basin, precisely in the vicinity of Obrenovac which was flooded in May. In normal circumstances, the lignite from Kolubara is transported through the villages of Obrenovac by 13 railway sets each having 27 wagons and eight locomotives. In the TENT power plants, this vast amount of coal heats the boilers and, by the steam, runs the turbines of as much as fifteen generators which have been rotating almost incessantly at the speed of 3000 times per minute for four decades. In this way, about 30 million tons of lignite are burnt within a year, this lignite practically keeping the entire state economy alive.

All analyses show that there is not an infinite amount of lignite, but that we can use it freely at least within the next fifty years unless we are prevented by floods. However, if, by chance, an environmental activist wearing a jumper enters the room in which this issue is discussed and in which there are, let us say, many EPS directors and mining and energy experts, and asks, as soon as he has entered: "What amount of CO<sub>2</sub> emission is caused by all that lignite?", he will probably be met only with confused glances. A politically more skilled director would probably answer that Serbia is a developing country and that it is not right that it should stop its development due to ecology, as the climate change has been caused precisely by those who have been developing owing to coal for the last 150 years. And

thereby, he would briefly present the framework of the previous state politics with respect to the climate change.

A detailed assessment on the amount of CO<sub>2</sub> emitted by the Electric Power Industry and, consequently, the entire society, can be made on the basis of the number of tons of CO<sub>2</sub> emitted when the coal similar to our lignite is burnt in the boiler room of a thermal power plant. The national assessments amount to around 875 kg of CO<sub>2</sub> for a ton of coal, whereas the assessments of the US Environmental Protection Agency range even up to 2.8 tons. According to this calculation, Serbia emits more than 30 million tons of CO<sub>2</sub> annually. The 40-percent reduction within the next 15 years, which is the latest European objective, means that Serbia would have to reduce the electricity generation in thermal power plants by 40 percent, i.e. to renounce the installed capacities of the TENT A and B. Yet, this is currently Serbia's greatest energy resource, and essentially, its only independent economic resource, even though coal is temporarily being imported into the country.

#### CHAPTER 27

Unfortunately, all these assessments are mostly speculative. Namely, at the moment, there are no official, expert and reliable documents containing the specific data on the level of renouncement that Serbia will have to face in order to achieve the European climate requirements during the accession process. Three years ago, in 2011, the government of that time announced the National Environmental Protection Strategy in which it was stated that the process on harmonization with the European legislation within this field would cost 10.6 billion euros. However, only the expenses incurred by this year's floods amount to 1502 million euros. At the same time, this soft projection, which largely refers to the change of regulatory rules, did not even take into account the EU climate objectives of that time, let alone the newly established ones. And the question is how it will even be possible to negotiate and to assume obligations without clear projections of the costs of all this. In fact, at this time, it is not even possible to make a real projection of costs, because, before this, it is necessary to have an accurate picture of the level of CO<sub>2</sub> emission of the Republic of Serbia. So far, Serbia has adopted five reports referring to the EU Emissions Trading System, and several other documents, mostly funded from the IPA funds, have also been prepared. Using the IPCC methodology, the Environmental Protection Agency has started the preparations for the so-called GHG inventory, i.e. an overall list of emissions of the CO<sub>2</sub> and other greenhouse gasses (GHG).

These data should enable the issuance of the Second National Communication on Climate Change which has not happened yet. Namely, it was only in 2010 that the previous Ministry of Environmental Protection and Spatial Planning managed to adopt the so-called Initial

National Communication, with a several-decade delay. These are the key documents which every country, signatory of the United Nations Framework Convention on Climate Change (UNFCCC), is obliged to adopt. Serbia acceded to this universally adopted Convention, ratified by as many as 192 countries, in 1992, but it completely neglected its obligations until recently. And this is the main reason why the CO<sub>2</sub> emission in Serbia is so little known about.

At this, a chronic lack of data is probably the biggest problem for the negotiations between Serbia and the EU within the field of environmental protection, which will be held within the chapter 27. Among other 35 chapters which need to be negotiated, this chapter, titled the Environment and Climate Changes, was already viewed as the “reddest alert” at the beginning of the year. However, the negotiations had to start inevitably. As it has been announced by the Ministry of Agriculture and Environmental Protection, the so-called Explanatory Screening for the Chapter 27 began in September. In addition to the Ministry, a large number of state bodies and agencies participate in this process, although it is already clear now that a better connection among them and a greater accessibility of information are needed, as well as a greater involvement of the economy, the energy sector, the local self-governments and the non-governmental sector.